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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,661

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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,661	Applicant(s) JERMOLAJEV, IGOR	
	Examiner Martin J. Angebrannt	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/02/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5,12 and 13 are under 35 U.S.C. 102(b) as being fully anticipated by Yamazaki JP 03-058077

Yamazaki JP 03-058077 (with notations from oral translation) teaches the articles of figure 11B and 7B which are copy molds. The process of forming the articles of figure 7B is the recording of a holographic image using a grating master through a mask, followed by development in the resist to form the articles of figure 6, which includes the text shown in figure 5B., this is overcoated with Ni (layer 71) which is then peeled from the resist master and used to form the copy mold by electrodeposition (page 4/right lower column, first line and page 3/upper right column to page 4/upper left column)). The examples with respect to figure 11A uses sandblasting of the master for the patterning. (figure 10 and text on page 4). The embodiment of

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figures 12, 13A and 13B coats an ink composition on the grating and then forms an (electroformed) embossing master from this.

The process of figures 12, 13A and 13B meets the limitation of the methods claims and claim 1. Even of the thickness of the final embossing master is thicker than the thickness of the ink layer, the intermediate product inherently meets the limitations as there would be openings in the electroformed shim corresponding to the "DNP" lettering. The "DNP" is held to identify the metallic plate as a product from Dainippon Printing.

4. Claims 1-6,8,9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. '660, Mallik '319 and Schaefer et al. 638

Gale et al. '660 teaches the formation of the original grating, coating this with a photoresist, exposure and development to expose a portion of the surface and then either electroplating (figure 1) or etching (figure 2) to form a raised portion or a depression.

Schaefer et al. 638 teaches the formation of a resist master in a photoresist, the growth of a metal shim or mother shim by silvering the resist, and electroforming Ni over the resist and peeling this from the resist surface. Daughter shims can then be formed from mother shim by electroforming. [0035-0038]

Mallik '319 teaches for the formation of gratings with projections, the metal master is formed with holds punched out of them. (figure 2 and text 4/58-5/14) The projection spacers can be in the opposing substrate as well (figure 3)

It would have been obvious to one skilled in the art to modify the process of figure figures 12, 13A and 13B of over Yamazaki JP 03-058077, by then electrolytically duplicating the modified grating as taught by Schaefer et al. 638 and growing the shim only to the thickness of

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the ink (or photoresist as with Gale et al. '660) and then peeling it, based upon the teachings of the formation of masters with holes punched in them by Mallik '319 which forms the holograms with holes in them without a separate punching step with a reasonable expectation of success based upon electrolytic growth upon gratings being known in the art as evidenced by Gale et al. '660. The shim produced meets the limitations of claims 1-4.

Even if the shim is formed thicker than the ink layer, the intermediate product meets the article claims.

5. Claims 1-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. '660, Mallik '319 and Schaefer et al. 638, further in view of Folger et al. '978

Folger et al. '978 teach making holographic stampers (3/31-52 and examples). Example II takes the nickel master of example 1 after peeling from the resist, the silver layer is treated with a potassium dichromate solution as a release agent (11/56-75). The process is also described with a cleaning step (8/36-75)

It would have been obvious to one skilled in the art to modify the processes rendered obvious by the combination of Yamazaki JP 03-058077, Gale et al. '660, Mallik '319 and Schaefer et al. 638 by cleaning and treating the master with potassium dichromate to passivate the surface as this is old and well known in the art to prevent bonding at the metal surfaces as evidenced by Folger et al. '978.

6. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Gale et al. '660, Mallik '319, Schaefer et al. 638 and Folger et al. '978, further in view of Sakurai et al. JP 05-016152.

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Sakurai et al. JP 05-016152 (machine translation attached) teaches the cleaning and drying of a stamper using ultrarefined/ultrapure water and ultrasonic treatment. (abstract)

It would have been obvious to one skilled in the art to modify the processes rendered obvious by the combination of Yamazaki JP 03-058077, Gale et al. '660, Mallik '319, Schaefer et al. 638 and Folger et al. '978 by using known cleaning processes for removing organic materials from stamper surfaces, such as the washing with ultrapure water and ultrasonication taught by Sakurai et al. JP 05-016152, with a reasonable expectation of success based upon this being within the field of forming metal stampers.

7. Claims 1-5 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki JP 03-058077, in view of Hirose JP 08-058274.

Hirose JP 08-058274 teaches intaglio printing of ink over holograms (abstract)

It would have been obvious to one skilled in the art to modify the processes if process of figures 12, 13A and 13B by using other known printing methods for providing ink onto holographic surfaces, such as the intaglio process taught by Hirose JP 08-058274, in place of the silk screen process used in the figures, with a reasonable expectation of success based upon the evidenced equivalent functionality.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kelly Cynthia can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Martin J Angebranndt
Primary Examiner
Art Unit 1795

/Martin J Angebranndt/
Primary Examiner, Art Unit 1795
April 15, 2010